

CLAIM AMENDMENTS:

Please amend Claims 1 and 2 as follows.

1. (Currently Amended): An image pickup apparatus comprising:
a plurality of pixels;
a color filter array of four ~~filters~~ colors disposed on said plurality of pixels,
wherein said color filter array has a color periodicity unit of two rows x two columns; and
an operation circuit which provides at least two different color difference signals using all the pixels included in the color periodicity unit,
wherein colors of the color filters in the color periodicity unit of two rows x two columns are all different from each other and have fixed positions.

2. (Currently Amended): An image pickup apparatus according to Claim 1, wherein the color filters in the color periodicity unit include a filter for transmitting only green light in a visible light range, a filter for intercepting only blue color in the visible light range, a filter for intercepting only green light in the visible light range, and a filter for intercepting only red light in the visible light range.

3. (Previously Presented): An image pickup apparatus according to Claim 1, further comprising a first operation unit which performs an operation of $A + B - C$

- D, where A, B, C, and D represent signals picked up from an area of two rows x two columns.

4. (Original) An image pickup apparatus according to Claim 3, wherein the signals A and B are disposed on a same line or on a same column, and the signals C and D are disposed on a same line or on a same column.

5. (Previously Presented): An image pickup apparatus according to Claim 3, further comprising a second operation unit which performs an operation of $A + C - B - D$.

6. (Original) An image pickup apparatus according to Claim 5, wherein the signals A and B are disposed on a same line or on a same column, and the signals C and D are disposed on a same line or on a same column.

7. (Previously Presented): An image pickup apparatus according to Claim 1, further comprising:

a first read-out unit which reads out a difference between: (a) an addition signal of a first row, first column signal and a first row, second column signal, and

(b) an addition signal of a second row, first column signal and a second row, second column signal, in an area of two rows x two columns, and

a second read-out unit which reads out a difference between: (a) an addition signal of a first row, first column signal and a second row, first column signal, and (b) an addition signal of a first row, second column signal and a second row, second column signal, in the area of two rows x two columns.

8. (Previously Presented): An image pickup apparatus according to Claim 7, wherein areas of two rows x two columns are disposed without any space therebetween.

9. (Previously Presented): An image pickup apparatus according to Claim 1, further comprising a read-out unit that reads out an addition signal of all signals in an area of four rows x one column.

10. (Previously Presented): An image pickup apparatus according to Claim 1, further comprising a read-out unit that reads out an addition signal of all signals in an area of one row x four columns.

11 - 39. (Cancelled)